

ID in the embodiment) unique to each object in a document or page, the object type, the object position, the size occupied by the object, and data representing the contents of the object. The object type includes, e.g., a text, text box, bitmap image, and vector image. The object contents include text data, vector data, color data of the text or vector, and bitmap data. A 1-page image is drawn on the basis of objects. The word processing application program 403 in the first embodiment performs drawing using a drawing function provided by the OS. In this case, the word processing application program 403 calls the function of the OS in accordance with a predetermined rule. "Drawing" in the first embodiment means calling the function of the OS for drawing. Note that the word processing application program 403 can also execute the "drawing" processing. In this case, "drawing" is processing by the application.

[0060] FIG. 7 is a block diagram showing software of the word processing application program 403 according to the first embodiment. The word processing application program 403 includes a user interface (UI) drawing unit 7021 and editing processing unit 7020. The user interface drawing unit 7021 reads a document data file 711, and creates a main pane-information storage table 712 (to be described with reference to FIG. 8A) on the basis of object information contained in each page. The user interface drawing unit 7021 creates a horizontal projection pane-information storage table 713 and vertical projection pane-information storage table 714. The word processing application program 403 draws a three-directional view (to be described with reference to FIG. 6) on the basis of these created tables. A drawing/output processing unit 701 of the OS draws a three-directional view, and the display 207 displays it.

[0061] The editing processing unit 7020 edits the opened document data file 711 in accordance with data input from the keyboard 206 and the pointing device (not shown) via an input processing unit 703 of the OS. The editing processing unit 7020 includes, for each edit function, a selection processing unit 7023, copy/cut processing unit 7022, movement/paste processing unit 7024, and position adjustment processing unit 7025. FIG. 18 shows processing procedures by the user interface drawing unit 7021. FIGS. 19A and 19B show processing procedures by the selection processing unit 7023. FIGS. 20A and 20B show processing procedures by the position adjustment processing unit 7025. FIG. 21 shows processing procedures by the copy/cut processing unit 7022. FIG. 22 shows processing procedures by the movement/paste processing unit 7024.

[0062] In FIG. 7, the UI drawing unit 7021 corresponds to a display means for displaying, on the display unit, a user interface window including the preview image of a page selected from document data, and for a plurality of pages contained in the document data, at least one type of a plurality of horizontally projected images obtained by projecting objects contained in the respective pages in the horizontal direction of the pages, and a plurality of vertically projected images obtained by projecting the objects in the vertical direction of the pages.

[0063] The selection processing unit 7023 corresponds to a selection means for selecting one or a plurality of horizontally or vertically projected images drawn by the drawing means, and thereby selecting objects corresponding to the selected projected images.

[0064] The editing processing unit 7020 except the selection processing unit 7023 corresponds to an editing processing means for editing an object selected in the user interface window.

[0065] FIG. 6 shows an example of a user interface used to edit a document of a plurality of pages by the word processing application program 403. Using the user interface (to be referred to as a three-directional view), the user changes, adds, or deletes an object laid out in each page without switching between pages to display each page. A three-directional view 600 has three panes (window frames). A main pane 601 displays each page of a document when viewed from the front. The main pane 601 displays current page selection tabs 604 corresponding to the number of pages contained in document data to be edited. The main pane 601 displays, as a current page, the contents of a page selected from the current page selection tabs 604. Selecting the current page selection tab 604 allows switching the current page. The position of an image (object) displayed in the three-directional view 600 is based on coordinates using an upper left corner 611 of the current page as the origin. This setting makes it possible to indicate the positions of objects by a common display method in respective pages of document data according to the first embodiment. However, the present invention is not limited to this method as far as the positions of objects can be uniquely indicated and compatibility with document data can be achieved.

[0066] A horizontal projection pane 602 displays the sizes and positions of figures (objects) contained in each page of a document. The horizontal projection pane 602 contains a horizontal projection pane tab area 605 of each page. Each figure is drawn as a segment having the vertical position and size of the figure in a horizontal projection pane tab area 605 corresponding to the page in which the figure is contained. That is, a horizontally projected figure drawn in the horizontal projection pane 602 indicates the position, size, and the like of the figure contained in each page when the page is viewed from the side. For example, a figure 612 which is contained in the current page (page 1) and is displayed in the main pane 601 is displayed as a segment 613 having a corresponding vertical position and length in the horizontal projection pane tab area of page 1. Note that the vertical direction described in this specification means the Y-axis direction in FIG. 6, and the horizontal direction means the X-axis direction.

[0067] A vertical projection pane 603 displays the sizes and positions of figures (objects) contained in each page of a document. The vertical projection pane 603 contains a vertical projection pane tab area 606 of each page. Each figure is drawn as a segment having the horizontal position and size of the figure in a vertical projection pane tab area 606 corresponding to the page in which the figure is contained. That is, a vertically projected figure drawn in the vertical pane indicates the position, size, and the like of the figure contained in each page when the page is viewed from the top or bottom. For example, the figure 612 which is contained in the current page (page 1) and is displayed in the main pane 601 is displayed as a segment 614 having a corresponding horizontal position and length in the vertical pane tab area of page 1. Note that the figure 612 and its horizontally projected figure 613 and vertically projected figure 614 are selected in the example of FIG. 6. Circles are added to the corners of the figure area in the main pane and